

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018888**Date Inspected:** 24-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Gang Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance(QA) Inspector Mr.Shrikant Utekar was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. The QA Inspector observed and/or found the following:

BAY # 14

ULTRASONIC TESTING

ZPMC NWIT No: 07478

This QA Inspector performed Ultrasonic Testing (UT) of approximately 10% of the length previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an (UT) report on this date. The members are identified as OBG 13AE. The weld designations are as follows:

SEG3007L-043, 044

SEG3007K-40

During the Quality Assurance (QA) random in-process observations of the fabrication of OBG in bay # 14, this QA Inspector observed the following Issue:

Issue No. 1

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ZPMC personnel performed welding for the fillet weld between deck panel diaphragm (X3588C) and deck panel “U” rib without adequate preheating of the adjacent base material.

During the welding This QA Inspector observed a 140 degree Celsius Tempstick did not melt when applied to the adjacent base material, weld number identified as DP3106C-001-112

The welding performed with Flux Cored Arc Welding (FCAW) process, area was being preheated using electric strip heaters.

Issue No.2

ZPMC personnel performed welding for the splice weld between VP3005 (PL3277A) and VP3006 (VP3278A) without adequate preheating of the adjacent base material, during the welding This QA Inspector observed a 160 degree Celsius TempStik did not melt when applied to the adjacent base material. Weld number identified as SEG3009V-104, the weld is complete joint penetration (CJP) weld. PL3277A and PL3278A are designated on the approved shop drawings as Seismic Performance Critical Members (SPCM). The welding performed with Submerged Arc Welding (SAW) process, the area was being preheated using electric strip heaters.

Issue No.3

ZPMC personnel performed weld repair for the weld between longitudinal diaphragm (LD3026) and floor beam web (FB3106) without adequate preheating of the adjacent base material, ZPMC did not perform NDT (Magnetic Particle testing) on the weld excavated area also they did not perform PWHT after complete weld repair before the temperature falls below the preheat temperature. During the welding This QA Inspector observed a 160 degree Celsius TempStik did not melt when applied to the adjacent base material, weld number identified as SEG3007Q-104, the welding performed with Flux Cored Arc Welding (FCAW) process, during the welding did not appear any electric strip heaters or torch

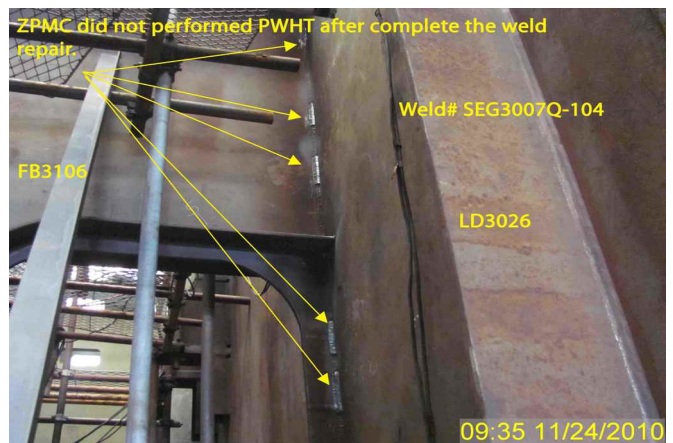
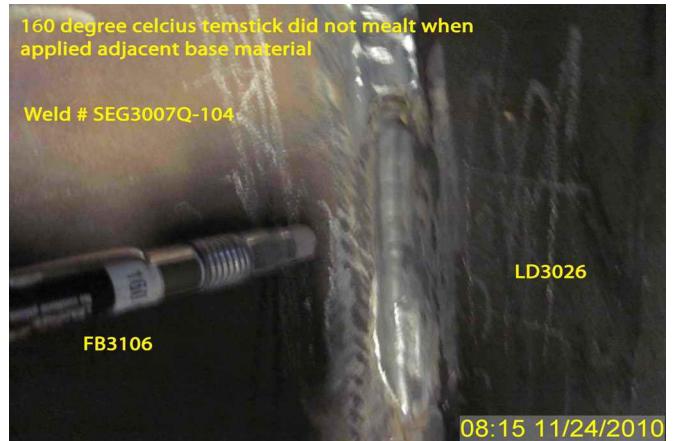
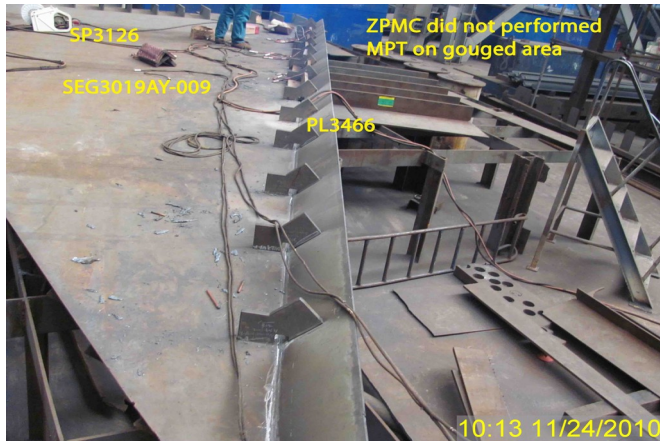
Issue No.4

ZPMC personnel performed welding for the weld between SP3126 (PL3462) and plate (PL3466) without performing NDT (Magnetic Particle testing) on the gouged area. Weld number identified as SEG3019AY-009, weld details as complete joint penetration (CJP) PL3462 designated on the approved shop drawings as Seismic Performance Critical Members (SPCM), the welding performed with Flux Cored Arc Welding (FCAW) process. Incidents reports were issued for all above issue, for more detail see attached photos

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

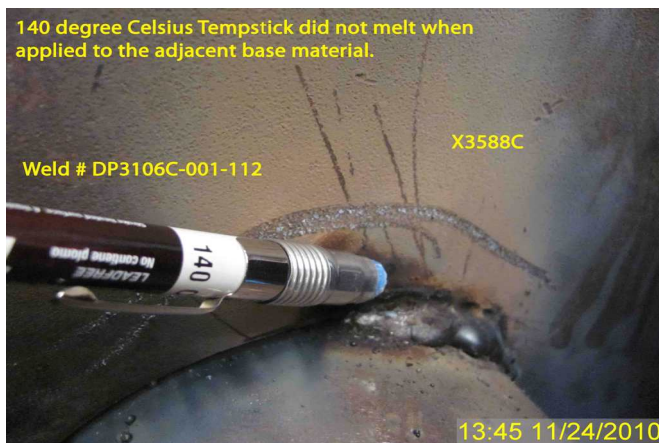
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Summary of Conversations:

No significant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, +(86) 1500 042 2372, who represents the Office of Structural Materials for your project.

Inspected By: Utekar,Shrikant

Reviewed By: Patterson,Rodney

Quality Assurance Inspector

QA Reviewer
